



Association of American
State Geologists



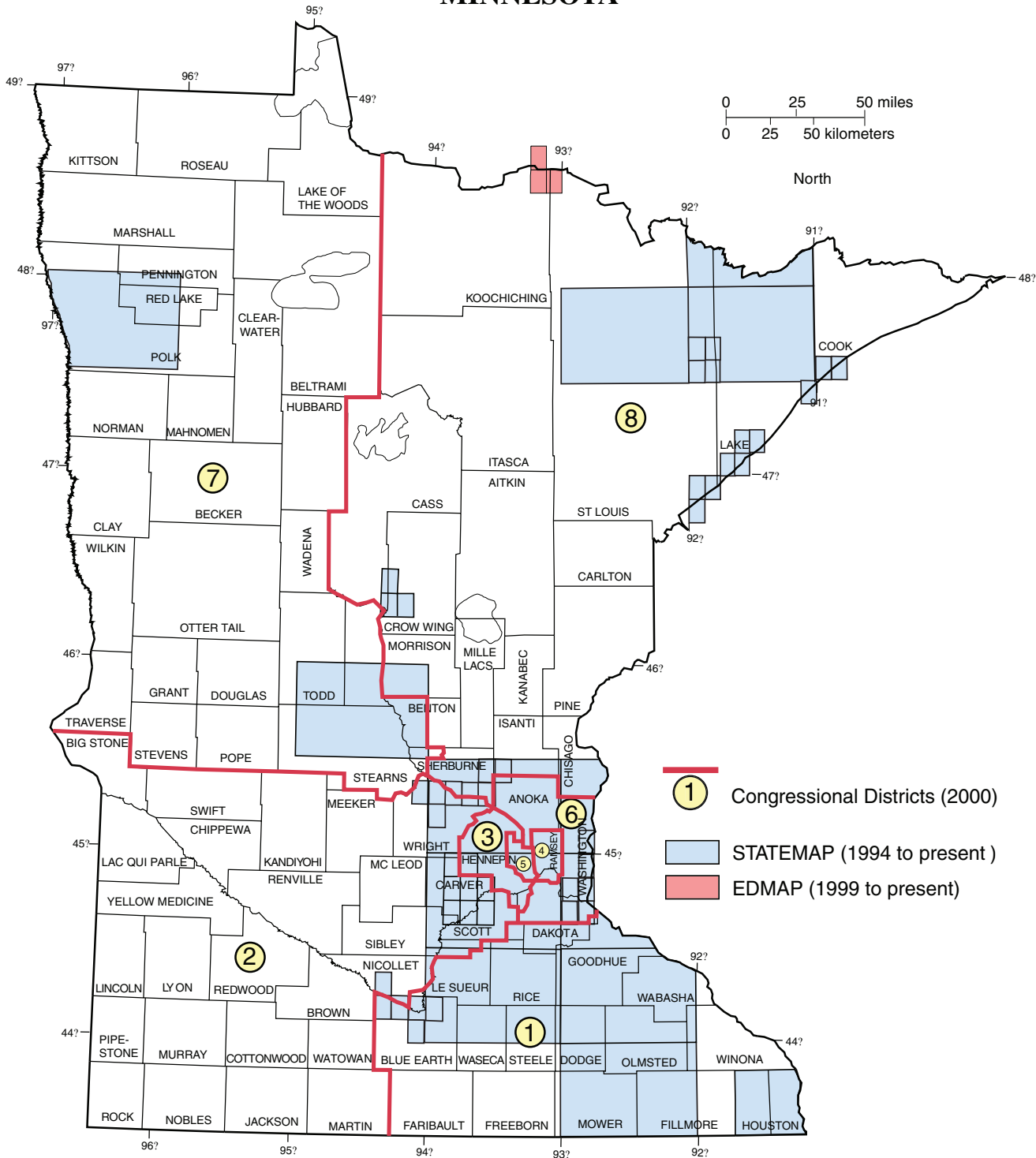
United States
Geological Survey



National Cooperative Geologic Mapping Program

STATEMAP/EDMAP Component: States compete for federal matching funds for geologic mapping

MINNESOTA



Contact information

Minnesota Geological Survey

Director: Harvey Thorleifson (612/627-4780)
STATEMAP/EDMAP Contact: Harvey Thorleifson
(612/627-4780) <http://160.94.61.144/mgs>

U.S.G.S. Geologic Mapping Program Office
Program Coordinators: Peter T. Lyttle (703/648-6943)
Martha Garcia (703/648-6978)
<http://ncgmp.usgs.gov/>

SUMMARY OF STATEMAP AND EDMAP
GEOLOGIC MAPPING IN MINNESOTA

Federal Fiscal Year	Project Title, Scale	State Dollars	Federal Dollars	Total Project Dollars
1993	Digitization of data from COGEOMAP projects (1987-92)	\$14,461	\$11,980	\$26,441
1994	Bedrock Geology of Houston County (eastern half) 1:100,000	\$18,000	\$18,000	\$36,000
1995	Bedrock Geology of Houston County (western half) 1:100,000	\$15,000	\$15,000	\$30,000
1996	Surficial Geology of the Shakopee quadrangle, 1:24,000			
	Surficial Geology of the Anoka quadrangle, 1:100,000	\$33,529	\$33,529	\$67,058
1997	Surficial Geology of the Jordan East quadrangle, 1:24,000			
	Surficial Geology of the Victoria quadrangle, 1:24,000	\$36,734	\$36,733	\$73,467
	Surficial Geology of the Jordan West quadrangle, 1:24,000			
1998	Surficial Geology of the Mound quadrangle, 1:24,000			
	Surficial Geology of the Stillwater quadrangle, 1:100,000			
	Surficial Geology of the Hastings quadrangle, 1:100,000	\$41,515	\$41,515	\$83,030
	Surficial Geology of the Waconia quadrangle, 1:24,000			
1999	Surficial Geology of the St. Paul quadrangle, 1:100,000			
	Surficial Geology of the Rochester quadrangle, 1:100,000	\$65,867	\$65,867	\$131,734
	Surficial Geology of the Watertown quadrangle, 1:24,000			
	Surficial Geology of the Belle Plaine N. quadrangle, 1:24,000			
2000	Surficial Geology of the Gull Lake quadrangle, 1:24,000			
	Surficial Geology of the Baxter quadrangle, 1:24,000			
	Surficial Geology of the Brainerd quadrangle, 1:24,000			
	Surficial Geology of the St. Cloud quadrangle, 1:100,000	\$76,942	\$76,912	\$153,854
	Surficial Geology of the Faribault quadrangle, 1:100,000			
	Surficial Geology of the Elk River quadrangle, 1:24,000			
	Surficial Geology of the Big Lake quadrangle, 1:24,000			
2001	Surficial and Bedrock Geology of the French River quadrangle, 1:24,000			
	Surficial and Bedrock Geology of the Lakewood quadrangle, 1:24,000			
	Bedrock Geology of the Babbitt NE quadrangle, 1:24,000			
	Bedrock Geology of the Knife River quadrangle, 1:24,000	\$156,081	\$156,081	\$312,162
	Surficial Geology of the Crown quadrangle, 1:24,000			
	Surficial Geology of the Lake Fremont quadrangle, 1:24,000			
	Surficial Geology of the Knife River quadrangle, 1:24,000			
2002	Surficial and Bedrock Geology of the Two Harbors quadrangle, 1:24,000			
	Bedrock Geology of the Castle Danger quadrangle, 1:24,000			
	Bedrock Geology of the Mankato East quadrangle, 1:24,000			
	Bedrock Geology of the Mankato West quadrangle, 1:24,000			
	Bedrock Geology of the Vermilion Lake quadrangle, 1:100,000	\$135,147	\$135,141	\$270,288
	Surficial Geology of the Monticello quadrangle, 1:24,000			
	Surficial Geology of the Silver Creek quadrangle, 1:24,000			
	Surficial Geology of the Castle Danger quadrangle, 1:24,000			
2003	Bedrock Geology of the Split Rock Point quadrangle, 1:24,000			
	Bedrock Geology of the Judson quadrangle, 1:24,000			
	Bedrock Geology of the Good Thunder quadrangle, 1:24,000			
	Bedrock Geology of the Ely quadrangle, 1:100,000	\$125,987	\$125,987	\$251,974
	Surficial Geology of the Annandale quadrangle, 1:24,000			
	Surficial Geology of the Buffalo West quadrangle, 1:24,000			
	Surficial Geology of the Austin quadrangle, 1:100,000			
	Bedrock Geology of the Two Harbors NE quadrangle, 1:24,000			
2004	Bedrock Geology of the Babbitt quadrangle, 1:24,000			
	Bedrock Geology of the Babbitt SE and SW quadrangles, 1:24,000			
	Bedrock Geology of the Courtland quadrangle, 1:24,000			
	Bedrock Geology of the Cambria quadrangle, 1:24,000			
	Bedrock Geology of the Stillwater quadrangle, 1:24,000			
	Bedrock Geology of the Hudson quadrangle, 1:100,000	\$149,554	\$149,554	\$299,108

	Surficial Geology of the Crookston quadrangle, 1:100,000			
	Bedrock Geology of the Schroeder quadrangle, 1:24,000			
	Bedrock Geology of the Tofte quadrangle, 1:24,000			
2005	Bedrock Geology of the Little Marais quadrangles, 1:24,000			
	Bedrock Geology of the St. Paul Park quadrangle, 1:24,000			
	Bedrock Geology of the Prescott quadrangle, 1:24,000			
	Bedrock Geology of the Vermillion quadrangle, 1:24,000			
	Bedrock Geology of the Hastings quadrangle, 1:100,000	\$149,562	\$149,562	\$299,124
10/12/05	TOTALS	\$1,018,379	\$1,015,861	\$2,034,240

Statement of outcome



Minnesota Department of Natural Resources

500 Lafayette Road
St. Paul, Minnesota 55155-40__

Mr. Dale R. Setterholm
Minnesota Geological Survey
2642 University Ave.
St. Paul, MN 55114-1057

Dear Mr. Setterholm:

Subject: Hudson and Stillwater Quadrangle STATEMAP Products

The recent Stillwater and Hudson Quadrangle maps have proved very useful in our ongoing evaluation of the City of Woodbury’s expanding water use and our ability to protect a nearby ground-water-fed cold-water trout stream.

All large ground-water users in the state of Minnesota must obtain a permit from the Department of Natural Resources. We regulate the allowable quantity based on a number of criteria including need, type of use, and impacts to surface water bodies.

The City of Woodbury is rapidly developing and expanding their water use. The City has drilled two new wells within two and one-half miles of the headwaters of Valley Creek, a highly valued cold-water trout stream. Overuse of the aquifer may seriously impact the base flow of Valley Creek.

The bedrock geology of this area is complex because of significant faulting. The MGS, through the STATEMAP program, has mapped many new faults to the Hudson and Stillwater Quadrangle maps. These faults are hydrogeologically very important. A newly mapped fault intersects the headwaters of Valley Creek and may significantly affect ground-water flow to the creek. It is probably a major reason why the headwaters exist where they do.

A recently developed ground water model of the area used the STATEMAP information as a foundation on which to build the model.

Sincerely,

Todd A. Petersen

Todd A. Petersen
Senior Hydrogeologist
DNR Waters

TAP:tap

